

Translation

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PCT/EP2003/010066

PATENT COOPERATION TREATY



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 9886-K11835	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/010066	International filing date (day/month/year) 10 September 2003 (10.09.2003)	Priority date (day/month/year) 10 September 2002 (10.09.2002)
International Patent Classification (IPC) or national classification and IPC F02B 37/04		
Applicant VOLKSWAGEN AG		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 6 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 10 February 2004 (10.02.2004)	Date of completion of this report 11 February 2005 (11.02.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International Application No.

PCT/EP2003/010066

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

☐ the international application as originally filed

☒ the description:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages 1-5, filed with the letter of 15 December 2004 (15.12.2004)

☒ the claims:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, as amended (together with any statement under Article 19

pages \_\_\_\_\_, filed with the demand

pages 1, 2, filed with the letter of 15 December 2004 (15.12.2004)

☒ the drawings:

pages 1/1, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

☐ the sequence listing part of the description:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☐ the claims, Nos. \_\_\_\_\_

☐ the drawings, sheets/fig \_\_\_\_\_

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International Application No.  
PCT/EP 03/10066**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims		YES
	Claims	1, 2	NO
Inventive step (IS)	Claims		YES
	Claims	1, 2	NO
Industrial applicability (IA)	Claims	1, 2	YES
	Claims		NO

**2. Citations and explanations**

1. The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 1 lacks novelty (PCT Article 33(2)).

1.1. Document US 4 903 488 (D1), which was already cited in the opinion of 10 September 2004, discloses:

a method for operating an internal combustion engine (30), in particular of a motor vehicle, with an air passage for intake air, in which are disposed a compressor (10), an exhaust-gas turbocharger (20), a waste gate (50) which causes an exhaust gas current to impinge upon a turbine (22) of the exhaust-gas turbocharger (20) and a throttle (32), an output of the compressor (10) being connected to an input of the exhaust-gas turbocharger (20), an air channel (13) that bridges the compressor (10) being provided and the throttle (32) being disposed downstream of the exhaust-gas turbocharger (20), a compression throttle (40) being disposed in the air channel (13) bridging the compressor (10), which optionally continuously closes exclusively the air channel (13) bridging the compressor (10) and controls

compression of the compressor (10), the compressor (10) being engaged in a load range or speed range in which the exhaust-gas turbocharger (20) alone cannot apply the desired charging pressure, and in this load range or speed range in which the exhaust-gas turbocharger (20) alone cannot apply the desired charging pressure, the compression of the compressor being controlled by the compression throttle (40) and the waste gate (50) being set to a maximum compression of the exhaust-gas turbocharger (20).

- 1.2. The applicant's argument concerning the control of the compression throttle in document D1 is untenable, since according to D1 the compression of the compressor at low and average speeds is controlled by means of the compression throttle, the waste gate being set to a maximum compression, i.e. closed (column 2, lines 34 to 43; column 4, lines 21 to 47). Document D1 thus also discloses controlling the compressor compression.
- 1.3. The applicant should note that document FR 2 818 310 (D3), which is cited in the search report, also discloses the subject matter of claim 1.
- 2.1. Dependent claim 2 does not contain any features which, in combination with the features of any claim to which it refers, meet the PCT requirements for novelty; see documents D1 and D3.

# Turbocharged engine including an engine driven supercharger

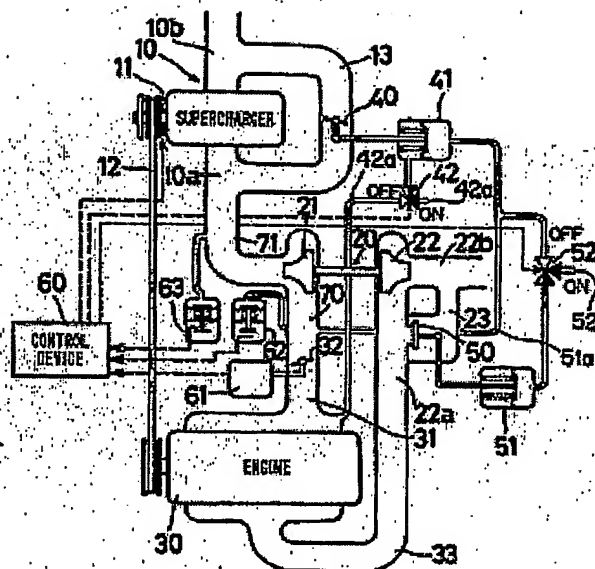
**Patent number:** US4903488  
**Publication date:** 1990-02-27  
**Inventor:** SHIBATA NORIYOSHI [JP]  
**Applicant:** AISIN SEIKI [JP]  
**Classification:**  
- International: F02B37/04  
- european: F02B37/04; F02B37/14; F02B37/18  
**Application number:** US19880251403 19880930  
**Priority number(s):** JP19870246705 19870930

Also published as:

JP1092525 (/)

## Abstract of US4903488

An engine has an air supply passage and an exhaust gas passage. A supercharger and a turbocharger compressor are disposed in the air supply passage. The turbocharger compressor is disposed downstream of the supercharger and is driven by a turbocharger turbine disposed in the exhaust gas passage. A valved air by-pass is provided for conducting air around the supercharger between the supercharger outlet and inlet. A valved exhaust gas by-pass is provided for conducting exhaust gas around the turbine. During engine low speed operation the air by-pass and exhaust gas by-pass are closed and air is compressed by both the supercharger and compressor acting in series. During an intermediate speed range, the air by-pass is partially opened under the control of the air pressure at the compressor outlet to assure that such air pressure does not exceed a preset value. During a high speed range (i) the supercharger is shut down and the air by-pass is fully open so that only the turbocharger compresses air, and (ii) the exhaust gas by-pass is opened under the control of the pressure in the air inlet passage to reduce the operation of the turbine and thereby assure that the air pressure in the air supply passage does not exceed the preset value.



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- 5 12. Kücheneinrichtungselement nach einem der vorangehenden Ansprüche,  
dadurch gekennzeichnet, dass  
die aktiv leuchtfähige Kante oder Fläche Weißlicht-LED aufweist.
- 10 13. Kücheneinrichtungselement nach einem der vorangehenden Ansprüche, ausgebil-  
det als Kühlschrank mit einer Beleuchtungsanordnung zur Innenraumbeleuchtung  
oder zur Beleuchtung eines Eispenders,  
mit einer Mehrzahl von Weißlicht-LED und mindestens einem benachbart zu den  
Lichtaustrittsbereichen der LED angeordneten Lichtdiffusor zur Verteilung des von  
den LED gerichtet emittierten Lichtes auf eine große Leuchtfläche.
- 15 14. Kücheneinrichtungselement nach Anspruch 13,  
dadurch gekennzeichnet, dass  
an oder nahe den Seitenkanten und/oder der Oberkante und/oder der Unterkante  
einer diffus reflektierenden, insbesondere mattweißen, Innenraum-Rückwand oder  
20 Innenraum-Seitenwand oder Tür-Innenwand eine im wesentlichen lineare Anord-  
nung von Weißlicht-LED mit ihrer Strahlungsrichtung in einem spitzen Winkel, ins-  
besondere nahezu streifend, zur Ebene der Innenraum-Rückwand oder Innen-  
raum-Seitenwand oder Tür-Innenwand angeordnet ist, derart, dass diese auf ei-  
nem großen Teil ihrer Fläche das von den LED emittierte Licht diffus reflektiert.
- 25 15. Kücheneinrichtungselement nach Anspruch 13 oder 14,  
dadurch gekennzeichnet, dass  
an einer Innenraum-Rückwand oder Innenraum-Seitenwand oder Tür-Innenwand  
ein großflächiges Lichtleiterelement und eine mindestens an einer Kante dessel-  
ben platzierte, im wesentlichen lineare Anordnung von Weißlicht-LED mit ihrer  
30 Strahlungsrichtung im wesentlichen parallel zur Erstreckungsebene des Lichtlei-  
terelementes vorgesehen sind, derart, dass an mindestens einem Abschnitt der  
Innenraum-Rückwand oder Innenraum-Seitenwand oder Tür-Innenwand ein groß-  
flächiger Austritt des über den Kantenbereich in das Lichtleiterelement eingekop-  
pelten Lichtes der LED bewirkt wird.
- 35 16. Kücheneinrichtungselement nach Anspruch 15,  
dadurch gekennzeichnet, dass